

# *VARIABLE INPUT SPEED TO WATER PUMP*

## **Abstract**

A variable ratio drive belt system is used to drive the water pump. The variable ratio drive belt system comprises a variable pitch water pump pulley, or driven pulley, a variable pitch crankshaft pulley, or driver pulley, and a drive belt that is coupled between a water pump and an engine crankshaft. By increasing and decreasing the size of the variable pitch water pump pulley and increasing the size of the variable pitch crankshaft pulley as a function of engine speed, the water pump speed can be increased at low engine speed to provide improved coolant flow and decreased at higher engine speeds to prevent pump cavitation.